P3® Rodine® is the worldwide standard for acid inhibitors – a reputation earned by on-the-job performance and proven results. P3® Rodine® acid inhibitors are formulated to ensure cost-saving dependability, without slowing production.

Our products and services are available worldwide through an extensive network of licenses and international branch operations.

 Features and Benefits

- Refineries
- Power Plants
- Paper and Paper Processing
- Petrochemical Plants
- Chemical Plants
- Water Treatment
- Cracking Towers
- Steam Generation Units
- Combustion Engines
- Cooling and Process Towers
- Heat Exchangers
- Piping Systems
- Pumps
- Skidframes
- Plant Equipment (NSF Approved)

 Facilities and Benefits

P3® Rodine® acid inhibitors are the most trusted acid inhibitors for removing scale, rust and other deposits from industrial equipment and systems.

P3® Rodine® formulations are designed to provide consistent superior protection to the base metal during acid cleaning operations without reducing productivity.

Henkel offers a full range of inhibitors designed for use in metal and surface applications. Products are available to protect most metals, including ferrous metals and galvanized surfaces.

P3® Rodine® is the worldwide standard for acid inhibitors – a reputation earned by on-the-job performance and proven results.
HAENEL AND ITS DISTRIBUTOR NETWORK ARE BACKED BY THE WORLD'S LEADING RESEARCH, DEVELOPMENT AND TECHNICAL SERVICE PROGRAMS.

### P3® Rodine® Acid Inhibitors for Chemical Cleaning

#### PRODUCT ACID TEMPERATURE PRODUCT APPLICATION REMARKS

<table>
<thead>
<tr>
<th>PRODUCT</th>
<th>ACID</th>
<th>TEMPERATURE</th>
<th>APPLICATION</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>P3® Rodine® 2010</td>
<td>Hydrochloric (Muriatic)</td>
<td>To 160°F</td>
<td>Inhibited</td>
<td>Includes instructions and all necessary equipment except hotplate and stopwatch.</td>
</tr>
<tr>
<td>P3® Rodine® 213</td>
<td>Hydrochloric (Muriatic)</td>
<td>To 220°F</td>
<td>Inhibited</td>
<td>For chemical cleaning of metal oxides and scale from power plant boilers and pipelines.</td>
</tr>
<tr>
<td>P3® Rodine® 31A</td>
<td>Hydrochloric (Muriatic)</td>
<td>To 200°F</td>
<td>Inhibited</td>
<td>Lower toxicity version of P3® Rodine® 213 SF.</td>
</tr>
<tr>
<td>P3® Rodine® 213 SF</td>
<td>Hydrochloric (Muriatic)</td>
<td>To 180°F</td>
<td>Inhibited</td>
<td>New sustainable inhibitors: Maximum Performance with Hydrochloric Acid, Low Toxicity, APE Free, Superior Health and Safety Ratings; Non-Flammable.</td>
</tr>
</tbody>
</table>

### P3® Rodine® Concentration Recommendations for Acid Pickling Applications

#### ACID METHOD TEMPERATURE PRODUCT VOLUME OF CONCENTRATED ACID (gallons) REMARKS

<table>
<thead>
<tr>
<th>ACID METHOD</th>
<th>TEMPERATURE</th>
<th>PRODUCT</th>
<th>VOLUME OF CONCENTRATED ACID (gallons)</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Continuous Strip</td>
<td>Batch Pickling</td>
<td>To 140°F</td>
<td>P3® Rodine® 50</td>
<td>1 to 4 pints per 100 gallons</td>
</tr>
<tr>
<td>Continuous Strip</td>
<td>Batch Pickling</td>
<td>To 190°F</td>
<td>P3® Rodine® 55</td>
<td>1 to 4 pints per 100 gallons</td>
</tr>
<tr>
<td>Continuous Strip</td>
<td>Batch Pickling</td>
<td>To 195°F</td>
<td>P3® Rodine® 3305</td>
<td>1 to 4 pints per 100 gallons</td>
</tr>
<tr>
<td>Continuous Strip</td>
<td>Batch Pickling</td>
<td>To 220°F</td>
<td>P3® Rodine® 102</td>
<td>1 to 4 pints per 100 gallons</td>
</tr>
<tr>
<td>Continuous Strip</td>
<td>Batch Pickling</td>
<td>To 100°F</td>
<td>P3® Rodine® 103*</td>
<td>10 to 25 gallons per 100 gallons</td>
</tr>
<tr>
<td>Continuous Strip</td>
<td>Batch Pickling</td>
<td>To 200°F</td>
<td>P3® Rodine® 145L</td>
<td>1 to 4 gallons per 100 gallons</td>
</tr>
<tr>
<td>Continuous Strip</td>
<td>Batch Pickling</td>
<td>To 100°F</td>
<td>P3® Rodine® 31A</td>
<td>1 to 4 gallons per 100 gallons</td>
</tr>
<tr>
<td>Continuous Strip</td>
<td>Batch Pickling</td>
<td>To 275°F</td>
<td>P3® Rodine® 51</td>
<td>1 to 4 gallons per 100 gallons</td>
</tr>
</tbody>
</table>

### New Sustainable Inhibitors:

P3® Rodine® 213 SF
- Maximum Performance with Hydrochloric Acid
- Low Toxicity
- APE Free
- Superior Health and Safety Ratings; Non-Flammable

P3® Rodine® 2010
- Maximum Performance with EDTA and Citric Acid
- Alkylpolyglycole-Free to Prevent Insolubility
- Over 98.5%+ Inhibition In Cleaning Solutions
- Compatible For Use On Mild And Stainless, as Well as Monel Alloys